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Sustainable Development Initiatives in the Malaysian Mineral Industry

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SUSTAINABLE DEVELOPMENT INITIATIVES IN THE MALAYSIAN MINERAL INDUSTRY

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Abstract

The Malaysian Mineral Industry is committed towards sustainable development as agreed by the Johannesburg Plan of Implementation in the World Summit on Sustainable Development in 2002. Efforts to implement sustainable development are on going. This paper will highlight some of the steps taken to implement the sustainable development efforts in the Malaysian Mineral Industry.

1.0 Introduction

The World Summit on Sustainable Development in 2002 produces a document called Johannesburg Plan of Implementation (Jpol). The document lays commitment and action plans of sustainable development in various fields like poverty eradication, health, trade, education, science and technology and natural resources including mineral resources.

2.0 Sustainable Development Initiatives

Every country that subscribed to the Jpol is supposed to formulate strategies and action plans for the sustainable mineral sectors along the following lines—

- (i) efforts to minimise impacts and maximise benefits on environmental, economic, health and social aspects of the mining industry
- (ii) expand the stakeholders involvement to ensure comprehensive development including efforts to rehabilitate /reclaim ex-mining lands
- (iii) promote sustainable mining practices through providing financial resources, human resources development and value added processes.

In Malaysia, the implementation of Jpol is through strategies, regulatory and steps taken by various quarters of the mineral industry. These cover the aspects of politics, economy, social, technology, environment and legislation.

3.0 Political Aspect

In the political aspect, the Government of Malaysia has taken initiatives to introduce the National Mineral Policy and the National Mineral Council.

3.1 National Mineral Policy

The First National Mineral Policy (NMP1) was drafted in 1992 and adopted in 1994. The NMP1 provided the foundation for the development of an effective, efficient and competitive regulatory environment for the mineral sector. The thrust of the policy is to expand and diversify the mineral sector through optimum exploration, extraction, and utilization of resources using modern technology as well as R&D. Emphasis is also given to environmental protection, sustainable development and the management of social impacts. The salient features of the NMP are the provisions for security of tenure, high land-use priority for mining, uniform and efficient institutional framework, regulations and guidelines, and rehabilitation and environmental control.

Subsequently, the policy was revisited in 2006 and a task force was formed to revise the NMP1. An updated and revised version of the NMP1 which incorporates the principles of sustainable development is named National Mineral Policy 2 (NMP2). The NMP2 which contains nine strategic thrusts was adopted in mid 2008 and launched in January 2009.

The first thrust is on Expansion of the Mineral Sector. The expansion is pursued by recognising mining as the first land-use, making more lands available for exploration and mining, integrating land use planning and increasing resource investigation including off-shore areas.

The second thrust is on Conducive Business Climate. To stimulate investment, the followings are necessary i.e. effective and transparent implementation of state mineral legislations; the use of a model mineral agreement between the state and investor; attractive fiscal and non-fiscal incentives, non restriction on foreign equity participation, access to capital and credit facilities; and the provision of security of tenure.

The third Thrust is on Environmental Stewardship. Incorporating environmental stewardship through implementing the regulatory and self regulatory environmental management measures like EIA, complying with policies and legislation locally and internationally, implementing progressive and post mining rehabilitation, promoting the recovery, recycling and reuse of minerals, metals and mineral-based products; ensuring the implementation of mine waste management measures, promoting and disseminating information on best mining practices, public disclosure and corporate social responsibility (CSR) and implementing a Mine Safety and Health Management Plan.

The fourth thrust is on research and Development (R&D) Enhancement. Enhancing R&D through provision of financial resources and incentives, promotion of regional and international collaboration; protection of R&D findings; strengthening partnerships and fostering cooperation amongst government, industry and institutions of higher learning; and the establishment of a coordinating body such as the Malaysian Mineral Development Board.

The fifth thrust is on Human Resource Development. To have qualified, competent and productive work force through relevant training and educational programmes, provision of scholarships, grants, etc., re-training and skills upgrading programmes and refresher courses, fostering collaboration amongst local and international organisations and establishing a training fund.

The sixth thrust is on Establishment of Integrated Mineral Information. Integrated mineral information can be achieved through the establishment of a national centre for data and information on mineral resources, sustainability, environmental performance and other related information; the strengthening of database linkages and networking with the various local and international agencies and the provision of training, facilities and infrastructure for the database management.

The seventh thrust is on Community Involvement and Social Responsibility. The support from the community and stakeholders can be achieved through a workable social adjustment strategy, an enduring relationship, adequate provision of social, safety, health and educational services, the establishment of a joint consultative committee and the implementation of Social Impact Assessment on mineral operations.

The eighth thrust is on Promotion, Marketing and Branding. Mineral products need to be effectively branded, promoted and marketed via the establishment of the Malaysian Mineral Development Board, coordinated and integrated promotion and marketing and the imposition of levy or cess to fund market development and promotion efforts.

The ninth thrust is on Publicity and Public Relations. The effective publicity and public relations could be achieved through education and dissemination of information to the public; engagement of the media, NGOs and all stakeholders; and the recognition to those who have contributed to the industry.

The implementation of the NMP2 is through a committee set up by the Ministry of Natural Resources and Environment, Malaysia. A set of action plans has been drafted consisting of short term, medium term and long term as well as annually.

3.2 National Mineral Council (NMC)

The NMC was established by the Malaysian Government in 1999 to formulate direction and the development of the mineral industry. The council is also tasked to coordinate relations concerning minerals between the Federal and State Governments. The council meets once a year to review and resolve matters and problems relating to mining and the mineral industry. Thus far, the Council has streamlined the policies, activities and other matters related to mineral industries.

As a whole, several important decisions made by the NMC like needing the states to adopt a model state mineral enactment, zoning of mineral resources, and having mineral clearance first before doing development have been taken up by the respective state government. These contribute to the sustainable mineral development.

4.0 Economic Aspect

The Malaysian government is encouraging local and foreign investors to venture into the development of the mineral industry which is a high risk investment area. The active participation of the investors

will ensure the limited resources available would be exploited optimally to give continuous returns for longer term to economic development of the country.

To entice investors the government has provided several measures like incentives given by the the Ministry of International Trade and Industry such as pioneer status, investment tax allowance, human resources development tax rebate, 100% foreign equity ownership, no import/export duty on minerals, and import duty exemption on certain machinery and equipment.

To allay the fears of investors, the State Mineral Enactment contains provisions like the security of tenure where mining lease is given based on the economic life of the deposit and the first right of refusal to the holder of Exploration or Prospecting Licence where they would be given the first option to apply for the mining lease in the licensed area.

Local entrepreneurs are also encouraged to grab the opportunity overseas by doing reverse investment to help the exploitation of minerals sustainably. With this, it will increase the Malaysian investment overseas and the two way trade between Malaysia and the respective countries. As an example how this reverse investment promotes sustainable development is the case of a tin smelter in Butterworth, Penang. The smelter mostly run on tin brought back by Malaysian companies doing reverse investment in neighbouring countries. So, with this, it provides mineral security to the smelter plant. Economically, no double taxation will be imposed on reverse investment.

Royalty rate collected by the State Governments for minerals extracted is generally 5% ad valorem. This rate is relatively higher compared to other countries. This is because infrastructure, utilities, education and health care are provided by the government. As such, the miners incur nominal cost for the construction of community's basic needs.

On taxation, the corporate tax rate imposed on companies doing business in Malaysia is comparatively low at about 25%. Another plus factor is for mining lands there is no premium imposed except annual rent or holding fees for mining lease or prospecting/exploration licences respectively.

5.0 Social Aspect

The social well-being of the mineral sector could be achieved with the participation of local community in mining operations. One way is to carry out a social impact study comprehensively on the local inhabitants. It has been a policy by the Malaysian Government that any large project to be carried out needs a social impact study. This is especially so for big mining projects where intensive studies on public views are needed on the project. These public views should be incorporated into the mineral development planning and mitigation measures.

Mining projects would normally bring employment benefits to the locals. The benefits are priorities would be given to the locals for employment; support to the local industries through procurement of goods and services from local contractors and suppliers for spare parts, small jobs, food catering, etc. To further get the views of the locals, a consultative committee is formed with representatives from the miners and the locals for regular dialogues or briefings. Apart from that, a family day or an open day would also be held. For example, four dialogues/briefings were held with the people's representatives in Raub, Pahang before a gold mine could resume. Similar cases are also done for quarries in Bukit Lagong, Selangor where the consultative committee would meet to discuss issues like lorries plying through the housing areas, prevention of road accidents, etc.

Other than that, mining companies also provide trainings. The example is the Penjom Gold Mine in Kuala Lipis where the mine has been used by the Department of Minerals and Geoscience as one of the training centres for its young officers to gain experience in hardrock mining operations. The mine also extends trainings to university students doing industrial training as well as hosting educational field studies and visits. These are seen as an important opportunity to demonstrate to the public the industry's commitment to safety, health, environment and rehabilitation matters. Local employees are also given trainings like on job or vocational trainings. Sometimes, big mining companies would conduct charity works like repairing schools, donating computers, building religious centres and giving best students award.

To further strengthen the social benefits for the people, Malaysia has established an Institute of Corporate Responsibility Malaysia (ICRM) which is promoting and educating the business community

with the best practices and international standards to integrate Corporate Social Responsibility (CSR) ideas into their businesses. The ICRM also conducts social impact studies, trainings, courses and other activities.

6.0 Technological Aspect

The technological aspect now becomes one of the important means to the development of the country mineral resources. Malaysia has a number of research institutions such as government agencies, universities and private sectors. To name a few they are the Mineral Research Centre (MRC), Department of Minerals and Geoscience, the Standards and Industrial Research Institute of Malaysia (SIRIM), the Institute for Development and Environment (LESTARI), Universiti Kebangsaan Malaysia, the Advanced Mineral and Quarrying, Environment, Science and Technology Research Cluster (AMQUEST), Universiti Sains Malaysia and the Penjom Gold Mine. These research institutions have several memoranda of understanding or joint venture agreements between government agencies, government agencies with universities or private companies or vice versa. One example is the MRC, Department of Minerals and Geoscience which has many joint ventures with local and international research institutions like public universities and the International Tin Research Institute (ITRI), United Kingdom. These joint ventures are efforts to maximise the usage of local mineral resources. Private sector also carries out research program like the Penjom Gold Mine where they are able to come up with unique processing systems including complex gravity circuits and resin-in-leach (RIL) technology to successfully recover the gold from carbonaceous ore.

7.0 Environmental Aspect

Under the various State Mineral Enactments any large scale mining project needs an Environmental Impact Assessment (EIA) study before the proposal is approved. Apart from the EIA which studies the impacts of the operation, the proponent needs also to submit the Mine Rehabilitation Plan (MRP) for approval. Both the EIA and the MRP need to be approved before the project could take off the ground. With these provisions, the environment would be guaranteed to be protected by the laws. To ensure the mining lands would be rehabilitated or render them useful for other land use after mining, the State Mineral Enactments also require the mining company to contribute into a fund called the Mine Rehabilitation Fund for large scale mines or a Common Rehabilitation Fund for small scale mines. A percentage or a fixed amount of the total rehabilitation cost needs to be paid annually for the large scale and small scale mines respectively. For the large scale mine, the miner is doing the rehabilitation work where as for the small scale mine the government is doing the rehabilitation work. Rehabilitation is done progressively not just after closure.

Under the Mineral Development Act 1994, there is a provision under Section 63(2) for the Minister in charge of mining to make regulations concerning environmental protections and safety. With this provision, the Mineral Development (Operational Mining Scheme, Plans and Record Books) Regulations 2007 was enacted. There are several more regulations concerning the environment being planned and are in various stages of preparations namely the Mine Effluents (ME) Regulations, the Use of Explosives and Blasting Agent (UEBA) Regulations, and the Safety in Surface Mines and Exploration (SSME) Regulations. The Mineral Development (Operational Mining Scheme, Plans and Record Books) Regulations 2007 deal with information or proposal needed in the proposed mining scheme. Matters like Regulation 3(i)(q) environmental protection measures including pollution control, monitoring and contingency plans; and Regulation 3(i)(s) proposed progressive rehabilitation and post mine closure plans need to be addressed.

The Environmental Quality Act, 1974 is the principal law relating to control and prevention of pollution. Apart from the EIA (Prescribed Activities) (Environmental Impact Assessment [EIA]) Order 1987, there are also other subsidiary laws made under the Act specifying standard of emission or discharge of pollutants to the environment such as Environmental Quality (Clean Air) Regulations, 1978, and Environmental Quality (Sewage And Industrial Effluents) Regulations 1979 respectively. The EIA Order requires an EIA report to be submitted for listed activities prior to project approval. A new proposed quarry becomes a prescribed activity if it falls within 3 km of any existing or already approved residential, commercial or industrial areas. Under Order 1987 also, mining lease areas that are more than 250 hectares, processing of aluminum, bauxite, copper, gold, and tantalum ore and sand dredging for areas more than 50 ha require an EIA. To sum up, this EQA is in line with the international standards.

8.0 Legislative Aspect

Clear legal framework has been laid down through the separation of powers between the Federal and State Governments. This is reflected by the Mineral Development Act (MDA) 1994, a federal law which provides for the inspection and regulation of the mining activities where as the various State Mineral Enactments, a state law, deal with the issuance of mining rights and related land matters. To show the commitment and the seriousness of the government in ensuring the laws are adhered, heavy penalties that commensurate with the offences are imposed. For example, the MDA 1994 was amended in 2007 to provide penalties for some offences up to RM100,000 or imprisonment for a term not more than five years or to both.

Other legislations that deal with mining are the Factories and Machinery Act, 1967 and the Occupational Safety and Health Act, 1994. The Factories and Machinery Act, 1967 deals with aspects of occupational safety and health of workers and workplaces but confined to factories and places where machinery is used such as manufacturing, mining, quarrying and construction industries. The Act requires factories and installations to have *certificate of fitness* (COF) and to be inspected prior to operation and periodically thereafter. For quarries, the COF is required for hoisting equipment. Meanwhile, the Occupational Safety and Health Act, 1994 has four goals, which one of them is, *to secure the safety, health and welfare of persons at work against risks to safety or health arising out of the activities of persons at work*. The Act puts the responsibility on employers to provide a safe workplace for their employees. It contains basic principles of safety and responsibility.

9.0 Conclusion

Continous efforts to strengthen the achievement made by Malaysia in the six aspects of sustainable development above will be implemented with the commitment of all parties including the Federal and State Governments as well as the industry. Although, relatively, the Malaysia Mineral Industry is small compared to other countries, commitment in imparting sustainable development efforts should be understood and practised by all quarters to project Malaysia's image internationally.

References

- Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 1987
- Factories and Machinery Act, 1967
- Institute of Corporate Responsibility Malaysia. <http://my-icrm.org/>
- Mineral Enactment (State of Johor), 2003
- Mineral Development Act, 1994 (Amendment 2007). (Act 525).
- Mineral Development (Operational Mining Scheme, Plans and Record Books) Regulations 2007
- National Land Code, 1965 (Amendment 2001). (Act 56).
- National Mineral Policy, Ministry of Primary Industry, 1994
- National Mineral Policy 2, Ministry of Natural Resources and Environment, 2009
- Occupational Safety and Health Act, 1994
- Penjom Gold Mine. <http://www.avocet.co.uk/penjom.html>
- Perak Quarry Rules, 1992

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INTRODUCTION

- SD Initiatives through strategies, regulatory and steps taken by various quarters of the Malaysian Mineral Industry



Political aspect

- National Mineral Policy
 - First National Mineral Policy (NMP1)
 - expand and diversify the mineral sector through optimum exploration, extraction, and utilization of resources using modern technology as well as R&D
 - Second National Mineral Policy (NMP2)
 - updated and revised version of the NMP1 which incorporates the principles of sustainable development
 - implementation through a committee set up by the Ministry of NRE which has short, medium and long term plans



Political aspect

- Second National Mineral Policy (NMP2)
 - Thrust 1 : Expansion of the Mineral Sector
 - Thrust 2 : Conducive Business Climate
 - Thrust 3 : Environmental Stewardship
 - Thrust 4 : Research and Development (R&D) Enhancement
 - Thrust 5 : Human Resource Development
 - Thrust 6 : Establishment of Integrated Mineral Information
 - Thrust 7 : Community Involvement and Social Responsibility
 - Thrust 8 : Promotion, Marketing and Branding
 - Thrust 9 : Publicity and Public Relations



Political aspect

- National Mineral Council (NMC)
 - established to formulate direction and the development of the mineral industry
 - tasked to coordinate relations concerning minerals between the Federal and State Governments



Economic aspect

- Incentives given by MITI
 - pioneer status
 - investment tax allowance
 - human resources development tax rebate
 - 100% foreign equity ownership
 - no import/export duty on minerals
 - import duty exemption on certain machinery and equipment.



Economic aspect

- State Mineral Enactments contain
 - the security of tenure
 - where mining lease is given based on the economic life of the deposit
 - the first right of refusal to the holder of Exploration or Prospecting Licence



Economic aspect

- reverse investment
 - encouraged local entrepreneurs to exploit minerals sustainably in other countries
 - increase Malaysian investment overseas and the two way trade
 - provides mineral security
 - no double taxation imposed



Social aspect

- needs social impact study
 - policy of the Government for large project
- public views incorporated into the mineral development planning and mitigation measures



Social aspect

- employment benefits
 - priorities would be given to the locals
- support to the local industries
 - procurement of goods and services from local contractors and suppliers for spare parts, small jobs, food catering, etc.



Social aspect

- consultative committee formed for regular dialogues or briefings
- on job or vocational trainings
- family day or open day
- charity works like repairing schools, donating computers, building religious centres and giving best students award



Social aspect

- Institute of Corporate Responsibility Malaysia (ICRM) promotes and educates the business community with best practices and international standards i.e. integrate Corporate Social Responsibility (CSR) ideas
- ICRM conducts social impact studies, trainings, courses and other activities



Technological aspect

- efforts to maximise the usage of local mineral resources by research institutions
- MOU or JV between/among government agencies, universities or private companies
- Research by private sector i.e. Penjom Gold Mine introducing processing systems of complex gravity circuits and resin-in-leach (RIL) to successfully recover gold from carbonaceous ore



Environmental aspect

- EIA study for large scale mining project
- needs also Mine Rehabilitation Plan (MRP)
- requires mining company to contribute into Mine Rehabilitation Fund for large scale mines or a Common Rehabilitation Fund for small scale mines
- A percentage or a fixed amount of the total rehabilitation cost needs to be paid annually for the large scale and small scale mines respectively
- Rehabilitation done by the miner for large scale and by the government for small scale
- Progressive rehabilitation not just after closure



Environmental aspect

- Minister in charge of mining empowered to make regulations on environmental protections and safety
 - The Mineral Development (Operational Mining Scheme, Plans and Record Books) Regulations 2007 was enacted
 - Several more regulations planned such as Mine Effluents, the Use of Explosives and Blasting Agent, and the Safety in Surface Mines and Exploration Regulations



Environmental aspect

- the EIA (Prescribed Activities) (Environmental Impact Assessment [EIA]) Order 1987 requires EIA report to be submitted for listed activities:
 - quarry within 3 km of any existing or already approved residential, commercial or industrial areas
 - mining lease areas > 250 hectares, processing of aluminum, bauxite, copper, gold, and tantalum ore and sand dredging for areas > 50 ha
- Other subsidiary laws specifying standard of emission or discharge of pollutants to the environment such as Environmental Quality (Clean Air) Regulations, 1978, and Environmental Quality (Sewage And Industrial Effluents) Regulations 1979 respectively

Legislative aspect

- Clear separation of powers between the Federal and State Governments
 - the Mineral Development Act (MDA) 1994, a federal law which provides for the inspection and regulation of the mining activities
 - State Mineral Enactments, a state law, deal with the issuance of mining rights and related land matters
- heavy penalties that commensurate with the offences are imposed



Legislative aspect

- Other legislations that deal with mining
 - Factories and Machinery Act, 1967
 - Occupational Safety and Health Act, 1994



CONCLUSION

- Continuous efforts to strengthen the achievement made by Malaysia will be implemented with the commitment of all parties including the Federal and State Governments as well as the industry
- Commitment in imparting sustainable development efforts should be understood and practised by all quarters to project Malaysia's image internationally.



Housing and buildings

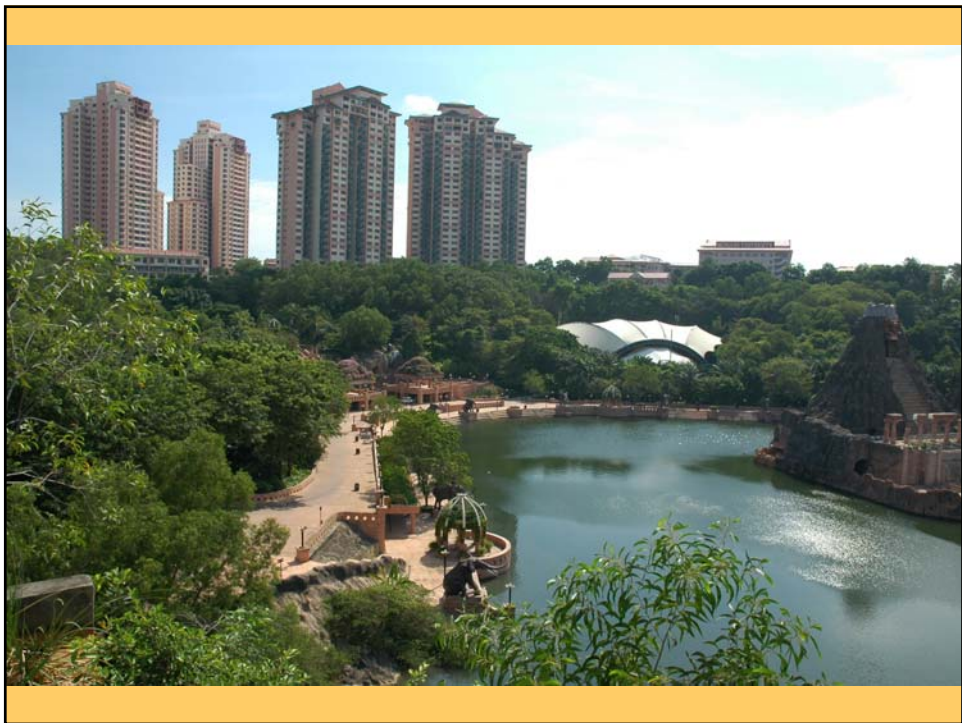
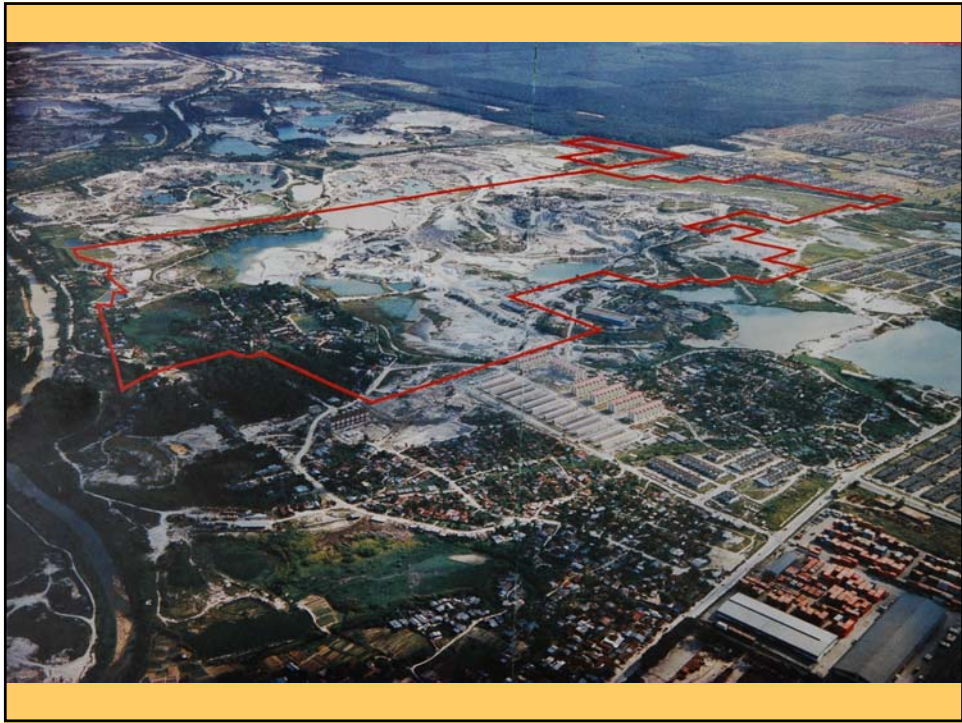




It was once the world's largest open-cast mine











• Thank you